Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules to	)	ET Docket No. 96-102
Provide for Unlicensed NII/SUPERNet	)	RM-8648
Operations in the 5 GHz Frequency Range	)	RM-8653

JOINT COMMENTS OF THE NATIONAL SCHOOL BOARDS ASSOCIATION, MEDIA ACCESS PROJECT, NATIONAL EDUCATION ASSOCIATION, AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS, AND PEOPLE FOR THE AMERICAN WAY

The National School Boards Association, Media Access Project, National Education Association, American Association of School Administrators, and People for the American Way, ("Joint Commenters") respectfully submit, by their counsel Media Access Project, these comments in response to the Commission's *Notice of Proposed Rulemaking*, FCC 96-193 (released May 6, 1996) ("NOPR").

SUMMARY

Joint Commenters applaud and support the FCC's visionary proposal to allocate spectrum sufficient to accommodate high-speed interactive applications in the 5 gigahertz band for unlicensed NII/SUPERNet devices. *NOPR* at ¶34. The free, unlicensed availability of this spectrum has the potential to play an integral role in achieving the Telecommunication Act's universal service goals -- by bringing telecommunications information services to rural areas, enhancing access to advanced information technologies by schools, libraries, health care institutions, and other community service providers, and doing so at low-cost.

This potential, however, will be fully realized only if the Commission also approves longer-range operations in the spectrum that would facilitate community networking. MAP urges

the Commission to approve such longer-range operations.

Finally, Joint Commenters believe the primary purpose of providing free access to this spectrum should be to serve the public interest, particularly by making access affordable and feasible for schools, libraries, and other nonprofit and governmental entities. The Commission should seek to ensure that technical standards and any protocol for sharing the spectrum provide for and give priority to the needs of such noncommercial users.

I. The FCC Should, As it Proposes, Allocate 350 MHz of Spectrum in the 5 GHz Band for Unlicensed NII/SUPERNet Devices.

New technological advances are redefining the integral role that telecommunications services play in our society. More than ever, access to telecommunications services are essential for participation in modern life and the workings of democracy. Telecommunications and information technologies are enabling new modes of exchanging opinions, information, and news. They offer innovative tools for education, for learning new skills, and for research. Through links to the Internet and other networks, computers are quickly becoming the principal means for finding jobs, researching issues and interests, learning about political candidates and the activities of Congress, and communicating with family, friends, and business associates. Those without access to telecommunications services will be increasingly disenfranchised, unable to engage in these fundamental activities.

The Telecommunications Act of 1996 recognized the fundamental importance of access to telecommunications and information technology and established goals to ensure universal service to people in all types of communities, at all income levels, throughout the country. Section 254(b) of the Telecommunications Act directs that

- Quality services should be available at just, reasonable, and affordable rates.
- Advanced telecommunications and information services should be provided in all regions of the nation.
- Low-income consumers and those in rural, insular, and high-cost areas should have access to telecommunications and information services, including advanced telecommunications and information services, of the type and at rates comparable to those in urban areas.
- Elementary and secondary schools and classrooms, health care providers, and libraries should have access to advanced telecommunications services.

Allocating free, unlicensed spectrum could help attain each of these critical goals. In situations where phone lines provide only low-quality transfer of data, wireless technology may provide a higher-quality option, and at a lower cost. The high bandwidth proposed would offer inexpensive access to advanced information services that have substantial need for high-speed data transmission capabilities to facilitate graphical and multimedia activity. No-cost access to spectrum can bring computer links into areas where service otherwise would be difficult or expensive to provide. Wireless technology is particularly well-suited to bring service to rural areas,[1] by enabling links between information resources in town and outlying institutions where wire or licensed wireless links are unavailable or unaffordable.

Perhaps most significant is the tremendous potential unlicensed wireless services offer for classrooms, libraries, health care providers, and other governmental and nonprofit institutions.

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[1]See, for example, *Survey of Rural Information Infrastructure Technologies,* National Telecommunications and Information Administration, U.S. Department of Commerce, September 1995, p. 5-8.

Joint Commenters believe these institutions have an absolutely essential role to play in ensuring universal access to advanced telecommunications services. *See Joint Comments of People for the American Way et al.*, CC Docket No. 96-45, April 12, 1996.[2] The ability to link computers via wireless, high-bandwidth technology can provide numerous benefits. It can link classroom computers to the Internet at low-cost; enable the establishment of local area networks where wiring would not be feasible (for example, in school buildings laden with asbestos or in extreme disrepair[3]); and provide for flexible networks that allow computers to be moved to another location or allow *ad hoc* networking among temporary work groups.

The allocation of free, unlicensed spectrum promises to yield significant public benefits and has almost no drawbacks. Joint Commenters wholeheartedly support the Commission's proposal to allocate this spectrum.

II. The FCC Should Provide for Longer-Range Operations That Will Enable the Development of "Community Networks."

Many of the potential benefits of making this unlicensed spectrum available, however, will be realized only if it is available for longer-range operations. Thus, the Commission's proposal not to allow such moderate-distance operations, *NOPR* at ¶47, is shortsighted and sharply reduce the public benefits this visionary proposal could provide. Joint Commenters

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[2]See also *America's Children & the Information Superhighway*, The Children's Partnership, September 1994, p. 5 ("America's school system represents the best way to teach every child information and technological skills").

[3]One-third of the nation's schools report that they need extensive repair or replacement of one or more buildings. *School Facilities: Condition of America's Schools*, General Accounting Office, February 1995, GAO/HEHS-95-61, p. 2.

encourage the Commission to permit the longer-reach links necessary to establish "community networks."

Community networking could yield tremendous public benefits, especially in rural areas. Just some of the potential uses include:

- Schools, medical clinics, and community centers can be connected through wireless technology in a community network that facilitates transfer of school assignments, health care information, and electronic mail, and more.
- Outlying institutions and residences can be connected to the community network through wireless links where wired service would be unavailable or expensive.
- A school system could establish a central computing site in one school, with access to Internet and other services, with outlying schools accessing these resources by wireless links.
- Schools and other public institutions could establish wireless links with the local library, tapping into the libraries special databases and information resources.
- Through wireless links to a community computing center or library, families in remote areas schooling their children at home could have access to a variety of educational resources.
- A disabled or sick child could be schooled at home, with access to curriculum resources through a wireless link to the school's computer network.

Without moderate-distance operations, however, the advantages of the unlicensed spectrum will be severely limited. Flexible networking within buildings permitted within the FCC's

proposal lead to important benefits, but the potential to hook up rural areas, to connect institutions to each other, to create easily accessible information banks in libraries and community computing centers, and for many other creative applications will be lost.

That is not to say that wireless community networking is the ultimate solution to all the challenges of universal access to telecommunications networks. Wireless technology will not work or be practicable in some areas, and reliable wire-line links will be desired and/or necessary in many circumstances. But free, wireless access presents a cheaper and easier alternative in numerous situations and will actually be the only feasible solution in some difficult circumstances. It will add a flexible, low-cost, creative tool to the toolbox of options for ensuring that all citizens have quality access to the information resources and services that are becoming essential to American life.

Joint Commenters acknowledge the Commission's concern about the potential for interference with other users and the limitations this could pose on the number of community network users. *NOPR* at ¶47. However, we encourage the Commission to risk tolerating some uncertainty and potential for conflicts if necessary to allow the wireless community networking concept to go forward. It seems counterproductive for the FCC not to allow moderate-distance operations for public use on the grounds that they might be too popular. Without these longer-reach links, many of the benefits of allocating unlicensed spectrum simply cannot be attained.

Although Joint Commenters do not claim technological expertise, we believe the potential benefits promised by moderate-distance operations outweigh the risk of problems from interference, and that the wireless community networking concept should go forward and be given a

chance to prove itself even if it appears to have limitations. It would be unfortunate for the Commission to undermine its bold proposal to allocate unlicensed spectrum by failing to allow the moderate-distance uses that offer the greatest public benefit.

Finally, the Commission's alternative proposal to allow community networking on a licensed basis is not an adequate substitute: once under the control of a licensed provider, the spectrum likely will lose many of its advantages in terms of cost, flexibility, and the opportunity for creative and innovative applications.[4]

For these reasons, Joint Commenters strongly urge the Commission to approve moderate-range operations in the 5 gigahertz band in its final rulemaking.

III. The Commission Should Give Priority to Nonprofit and Governmental Users in Establishing Technical Standards and Should Make Clear That the FCC Will Give Priority to the Needs of Public Interest Uses in Considering the Adoption of Any Spectrum-Sharing Protocols.

The allocation of free, unlicensed spectrum is a public subsidy, albeit an extremely worthy one. Joint Commenters believe, therefore, that the public interest should be paramount in determining the use of the spectrum. Protocol and standards should ensure that uses anticipated by classrooms, libraries, health care providers, community computing centers, government health and safety programs, and other nonprofit organizations are accommodated. Joint Commenters are particularly concerned that competition among uses or users operating at longer distances not be allowed to block out nonprofit and governmental users in favor of commercial, entertainment,

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[4]For example, private wireless systems find it financially undesirable and therefore are inclined not to provide service in very thin rural and remote locales. *The Future of Wireless Communication: Recent Developments*, Columbia Institute for Tele-Information, Columbia Business School, May 5, 1995, p. iv.

or other uses not deserving of the public subsidy provided by free spectrum. Joint Commenters do not endorse giving priority to any particular technology. However, any technical standards or spectrum-sharing etiquette should give priority to uses that would be difficult or unaffordable to accomplish through wired or licensed wireless technology, that would reduce governmental spending, or would enhance governmental and nonprofit functions.

In particular, to the extent the Commission's proposal allows and encourages the private sector to develop etiquette protocols through a cooperative consensus process, *NOPR* at ¶52, the FCC should encourage the representation of users from the education, library, health care and nonprofit sectors in such a process. The Commission also should declare that for any such protocol to gain future FCC approval, it must place priority on meeting the needs of noncommercial uses and users.[5]

CONCLUSION

We can only guess at the potential that the availability of free, unlicensed spectrum will bring. Computing technology advances and applications consistently have exceeded expectations, and the availability of this spectrum, where the uses and users will not be constrained by licenses, high costs, or complex technical standards, should engender especially vigorous and rapid innovation. We commend the Commission for its plan to allocate unlicensed spectrum for the public freely to use, but it is vital that at the same time the Commission allow moderate-distance

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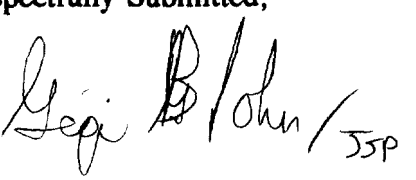
[5]MAP urges the Commission not to allow repetition of the mistakes made in selecting the Advisory Committee on Advanced Television Service (ACATS). ACATS does not include a public interest representative--thereby limiting the deliberations of that committee to the interests of the various represented industries.

operations in the spectrum. It is these operations that have the most potential to help attain the country's universal service goals and to bring the National Information Insfrastructure to institutions, individuals, and communities that may otherwise find access difficult or impossible, at least for many years. If the Commission approves only short-range operations, it will forego the major public benefits the unlicensed spectrum has to offer.

Respectfully Submitted,



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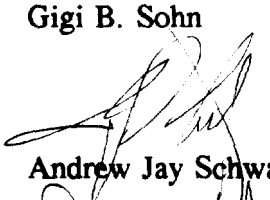

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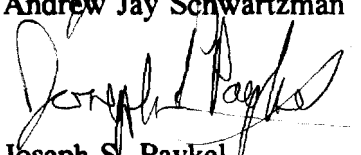

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